C. Contrary to belief prevailing hitherto, the code now contemplates including research activities as well.

D. Activities of laboratory assistants can not be limited to the forty hour maximum average affecting employees receiving less than thirty-five dollars per week.

E. That the Code Committee of eight has been unfair to other laboratories in the process of code formation and that thereby doubt is cast on their fairness in the administration of the code.

F. That the proposed code offers no protection against unfair competition by state institutions and inadequate protection against university laboratories.

The administration appears to be eager to further the acceptance of the code and therefore attempts to bring into harmony the various factions concerned. From the point of view of the NRA codification of all industries is highly desirable for purposes of further reduction of hours and increase in wages *en bloc*.

The group represented by the writer has since its inception (July 3, 1933) endeavored to steer a middle course by cooperating with the NRA and developing a code which in addition to the features required by the NRA would contain provisions strengthening the profession of the food chemist and thereby increase employment. This movement has the cooperation of over seventy-five laboratories representing approximately four hundred workers. Most of the laboratories are small and their problems are more those of the employee than of the employer. In fact, many of the collaborators had to abandon all help with the exception of a porter or office boy. The principal way to aid recovery is to get more work. There is overwhelming evidence at hand that the food industries, still quite prosperous, in general consider laboratory work a luxury. In many cases laboratory reports are mere incidentals supplementing the purchasing agents' good judgment, connection with a laboratory being maintained for its "scenery effect." Because of this attitude the chemist is not rendered the same degree of recognition or business courtesy as his professional brothers, the legal adviser or the advertising counselor. Executives will sanction the expenditure of ten thousand dollars to a convincing charlatan who is able to simulate an improvement of their products by word of mouth or on paper, but will hesitate to appropriate one thousand dollars for honest work to be done in the actual improvement of their products.

The code proposed by the "Organized Food Laboratories" may be unorthodox as codes go, but it endeavors to remedy these conditions by gaining proper recognition for honest scientific work. It provides for a carefully planned, well-coordinated joint effort, to bring closer together the food industries and the independent specialized laboratories. Among the methods to be employed for this purpose the following are ready to be put into operation:

A. Enlargement of the bi-weekly news letters to include material of direct interest to the manufacturers.

B. Issuance of a directory listing all food laboratories and their specialties such as cereal products, vitamin assays, food preservatives, fruit sprays, milk products, chocolate, confectionery products, potable waters, meat and meat products, fruits and vegetables, beer, wines, distilled liquors, oils and fats, fodders, etc., etc.

C. Issuance of bulletins on special fields illustrating the dollar and cents value of applied science.

D. Full-page advertising in food journals listing members of the food laboratory industry.

Simultaneously with these endeavors to more closely mesh laboratory and industry, there will be activities to improve the industry itself, such as:

A. A section of the news letter will serve as a clearing house for new methods and improvement of old ones.

B. Agreements on standard methods wherever possible.

C. Classification of employees according to training and practical experience, etc., etc.

To be fully effective the plan must include all laboratories serving the food industries. The code will contain a clause making cooperation toward greater and more effective service to food industries compulsory. The increased work resulting from this program will render the compulsory features, such as the fifteen dollar a week minimum and the forty hour maximum for employees receiving less than thirty-five dollars a week, unobjectionable.

The plan has "NRA value" both from the angle of labor as well as the angle of the consumer. It is unusual, but in this day of alphabetic management the unusual becomes the order of the day. It can be said with near certainty that it will put chemists back to work.

H. H. BUNZELL,
Chairman, Code Committee
"Organized Food Laboratories"

LABORATORY FEES

APROPOS of Dr. Swan's note on page 579 of the issue of SCIENCE for December 22, 1933, I would like to call attention to the fact that at least some institutions have already acted on the suggestions which he makes.

In September 1925, a $10.00 incidental fee per quarter was first charged all students at Montana State College to replace the former laboratory fees charged students. Since the inauguration of this plan students in laboratory science courses have paid no

more for their educational opportunities than other students except their actual breakage in the laboratories. The laboratory breakage and the cost of chemicals and supplies used in chemical laboratories for instructional purposes is not nearly so large as many people suppose. This misconception no doubt arises from the rather large laboratory fees charged at some institutions, where at least a part of these fees are used to buy research material and equipment.

It has been shown[1] that students breakage in chemistry per quarter credit hour averages about $0.40 for some land grant schools and that the total average cost of chemicals, supplies, stock-room operation and this breakage item is only about $0.90 per student quarter credit in all the courses ordinarily taught by a chemistry department where there are not a large number of graduate students doing research work. If a student carried a very heavy schedule of 50 quarter credit hours during the year and this was all laboratory science, his breakage would be approximately $20.00 per year. Seldom will half of his work be laboratory science courses, however.

I believe that Dr. Swan is correct in his belief that laboratory fees originated in the early days of laboratory work when it was only tolerated—not welcomed—and for that reason not permitted to have any money. Unfortunately this attitude still persists rather strongly among many administrators. They are not only niggardly in their money allowance for laboratory work, but they do not (nor do most of the crediting associations) give the laboratory instructor full credit for hours in the laboratory on the same basis as hours in the classroom, nor is there any allowance for this in salary. This is true, despite the fact that it frequently requires much more preparation to teach the laboratory work and that laboratory teaching is frequently much more exacting than lecture work. Many administrators are no doubt familiar with very poor laboratory work where little, if any, preparation is made and where the instructor sits in his office during the laboratory period. I do not, however, believe this is an excuse for classing all laboratory instruction in this category. Some lectures are given with the same lack of preparation.

I heartily agree with Dr. Swan in regard to the distribution of the laboratory costs among all the students, and Montana has made this uniform cost distribution in all the state schools. However, I believe the idea should be carried farther and laboratory science teachers given credit for laboratory teaching on the same basis as for lectures, quizzes and recitations.

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[1] Sheppard, *Journal of Chemical Education*, 10: 635–6, 1933.

INDIA AND AMERICAN SCIENCE

IN SCIENCE for July 14, 1933 (78: 2011, 36), "Taxila" writes about the attitude of Indian men of science towards American science. He says that the "opinion expressed by the majority of them relative to American scientific work was that much of it was 'spurious,' 'no scientific value,' 'will have to be carefully repeated,' 'take with a ton of salt all that comes from the New World,' etc." Then he goes on to say that such prejudices are not based on facts, and finally suggests as a solution that the answer to this prejudice lies in the fact that many scientific institutions and societies in America send their publications free to any one who chooses to ask for them. In the concluding paragraph "Taxila" gives the advice that it "is time for the experiment stations to revise their free distribution policy, especially in these depression days, and help also in acquiring a proper recognition for American science." If the free distribution policy were the real cause, it should be discontinued not only "especially in these depression days," but always.

As a native of India and as a man of science, may I be permitted to express my opinion on the subject? Unfortunately it is quite true that the opinion in India about American science is as "Taxila" has expressed it very clearly. But neither the explanation nor the remedy is what he would have us believe. Any one writing for "literature" is naturally seeking knowledge, and it would be unreasonable to suppose that he would take the trouble to write to America unless he were genuinely interested. Of course, there are some whose interest lies not in the scientific value of the publications, but in collecting a library, and such people, of whom there are many, need not be taken into consideration. I believe that those Indians who write for and obtain gratuitously bulletins and memoirs are sincerely grateful for any assistance accorded to them by the papers in question, and to the institution for its "desire to help and for the spread and dissemination of knowledge." It is true that certain institutions are "over generous" in sending all their publications, and that is a practise which should be discontinued by all means. In these days of specialization one can hardly find time to read all that is published in his own subject, and can therefore give no more than a passing interest to subjects which are not directly or indirectly allied to his own.

The reason why American science is looked upon with contempt is altogether different to what "Taxila" has suggested; it lies in the educational system of America. We all know that good and bad universities are to be found in every country. The custom in England, as also in India, is to always write the name of